2021 Human Cognitive and Behavioral Science – Request for Applications

Grants awarded through this RFA are intended to produce foundational knowledge about the neurobehavioral differences associated with ASD, which will directly inform the development or refinement of tools needed for translational efforts, such as biomarkers and outcome measures. Special emphasis is placed on objective, quantitative measures that may be used in conjunction with standardized clinical measures and genomic information to better triangulate phenotypic and neurobiological variability within and across individuals with ASD.

The maximum budget is \$750,000 or less, inclusive of 20 percent indirect costs, over a period of up to three years.

Policies and Procedures Application Deadline May 3, 2021

Maximum Budget

Over a period of up to three years Maximum of \$750,000

Important Dates

Application Available March 1, 2021

Informational Zoom Meeting March 24, 2021

Application Deadline May 3, 2021

Award Notification August 2021

Award Start Dates

September 1, 2021 October 1, 2021 November 1, 2021

SFARI Mission

The mission of the Simons Foundation Autism Research Initiative (SFARI) is to improve the understanding, diagnosis and treatment of autism spectrum disorders (ASD) by funding innovative research of the highest quality and relevance.

Background and Objective

A thorough understanding of the human condition is bedrock to scientific research that aims to improve the lives of affected individuals. To this end, the scientific community has made tremendous advances in deciphering the genetic architecture of ASD, which includes genomic analyses of SFARI-funded cohorts, such as SPARK, Simons Searchlight and the Simons Simplex Collection.

To better understand the cognitive and behavioral foundations of ASD, SFARI is now launching a new, annual, investigator-initiated request for applications (RFA) that is specifically dedicated to clinically relevant research of ASD. SFARI will use this grant mechanism to more explicitly outline our scientific priorities, and tailor grant budgets and review processes to support the unique opportunities and challenges inherent to studies that directly involve individuals with ASD. The goal of this grant mechanism is to improve the quality and number of investigator-initiated human cognitive and behavioral projects, and to better align this research with other ongoing SFARI efforts.

Scientific Priorities and Scope

The Human Cognitive and Behavioral Science RFA prioritizes research that produces foundational knowledge about the neurobehavioral differences associated with ASD, which will directly inform the development or refinement of tools needed for translational efforts, such as biomarkers and outcome measures. Special emphasis is placed on objective, quantitative measures that may be used in conjunction with standardized clinical measures and genomic information to better triangulate phenotypic and neurobiological variability within and across individuals with ASD.

In particular, we encourage studies which capitalize on approaches to behavioral analysis that are informed by recent advances in computer vision and machine learning, as well as psychophysics and non-invasive neuroscience techniques (e.g., EEG and MRI). SFARI has a strong interest in developmentally focused studies in areas that include, but are not limited to, communicative, social and ritualistic/stereotyped behavior, as well as sensory and motor function. SFARI also recognizes the importance of domains of function, such as attention, learning and memory, and sleep, in influencing core ASD diagnostic domains. Applications may propose either laboratory-based or real-world measures of behavior (i.e., wearables/"digital phenotyping").

We encourage proposals conceptualized within rigorously defined theoretical/computational or neurobiologically-grounded frameworks. Importantly, proposals addressing current theories of autism should include experiments to directly examine falsifiable hypotheses. We also welcome studies which deepen our

understanding of cognitive constructs that are often modeled in experimental animals. These may include, but are not limited to, learning and memory, attention, repetitive behaviors, stereotypy, sensory processing and motor function. For applications that wish to conduct parallel studies in both humans and in experimental models (e.g., mouse models, induced pluripotent stem cells), please contact scienceRFA@simonsfoundation.org for further guidance from the SFARI science team.

SFARI considers the following as out-of-scope for this RFA: studies with a primary focus on developing new clinical rating scales of survey-based assessments or online adaptations of traditional paper and pencil tests, such as cognitive (IQ) or social-cognitive tests. In addition, we discourage applications with a primary focus on psychosocial factors, or those proposing interventional clinical trials or medical treatments.

Participant Recruitment and Sample Sizes

Given the heterogeneity and multifactorial causes of ASD, SFARI places a premium on the use of wellcharacterized and sufficiently powered cohorts. SFARI is particularly interested in research study designs that stratify participants by genetic etiologies or other biologically meaningful criteria.

To facilitate recruitment of well-characterized ASD cohorts, SFARI has developed <u>Research Match</u>, a robust inhouse program to help investigators recruit participants from Simons collections, including <u>SPARK</u> and <u>Simons</u> <u>Searchlight</u>. RFA applicants are strongly encouraged, but not required, to use Research Match as part of their participation recruitment strategy.

Through this grant mechanism, SFARI expects to support projects of varying scales, from small, proof-ofprinciple studies to larger studies that examine additional ASD-relevant parameters or subpopulations. However, when possible, we encourage iterative study designs that move quickly from pilot studies to more scalable approaches, which will lead to more generalizable findings.

Level and Duration of Funding

The total budget is \$750,000 or less, inclusive of 20 percent indirect costs, over a period of up to three (3) years. For projects that propose 2–3 years of research, progress will be critically evaluated at the end of each annual funding period before support for the upcoming year will be approved. Allowable indirect costs to the primary institution for subcontracts are not included in the \$750,000 total budget threshold (see grant policies).

We strongly encourage investigators to tailor their requested budgets and duration to levels appropriate for the scope of their specific aims. As with all SFARI-funded projects, it is at the foundation's discretion to modify final budgets as needed. It is to the investigator's advantage to include realistic budget estimations in their initial grant application.

Eligibility

All applicants and key collaborators must hold a Ph.D., M.D. or equivalent degree and have a faculty position or the equivalent at a college, university, medical school or other research facility.

Principal investigators (PIs) who do not have substantial ASD clinical expertise should include a close collaborator with such expertise on their grant application (e.g., multi-PI application).

SFARI recognizes the importance of diverse viewpoints for scientific advancement. As such, SFARI strongly encourages the inclusion of researchers who span institutions, career stages and groups historically underrepresented in science.

Applications may be submitted by domestic and foreign nonprofit organizations; public and private institutions, such as colleges, universities, hospitals, laboratories, and units of state and local government; and eligible agencies of the federal government. There are no citizenship or country requirements.

Instructions for Submission

Applications must be completed electronically and submitted using forms provided at proposalCENTRAL. Please log in as an applicant, go to the grant opportunities tab, scroll to "Simons Foundation," and click "Apply Now" for the SFARI – Human Cognitive and Behavioral Science program. For assistance, please call 800-875-2562 or email pcsupport@altum.com.

Details concerning application requirements and submission can be found in our <u>instructions</u> or on proposalCENTRAL. If you have other questions, please review our FAQs.

Informational Sessions for Potential Applicants

To answer questions about this RFA, SFARI will hold an informational Zoom meeting on Wednesday March 24, 12-12:45 p.m. ET. Register <u>here</u>.

Contacts

Scientific inquiries: sciencerfa@simonsfoundation.org 646-654-0066

Administrative inquiries: sfgrants@simonsfoundation.org 646-654-0066

Simons collections inquiries: collections@sfari.org 646-654-0066

proposalCENTRAL: pcsupport@altum.com 800-875-2562

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